

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A liquid crystal display device comprising:
 - a pair of substrates;
 - a liquid crystal interposed between the pair of substrates;
 - a thin film transistor over one of the pair of substrates; and
 - a pixel electrode connected to the thin film transistor,wherein the thin film transistor comprises:
 - a gate electrode comprising a chained metal body of nanoparticles over the one of the pair of substrates,
 - a first layer including at least one of silicon nitride and silicon nitride oxide formed on and in direct contact with the gate electrode,
 - a gate insulating layer at least comprising a second layer including silicon oxide over the first layer, and
 - a semiconductor layer over the gate insulating layer.
2. (Previously Presented) A liquid crystal display device comprising:
 - a pair of substrates;
 - a liquid crystal interposed between the pair of substrates;
 - a thin film transistor over one of the pair of substrates; and
 - a pixel electrode connected to the thin film transistor,wherein the thin film transistor comprises:
 - a gate electrode comprising a chained metal body of nanoparticles over the one of the pair of substrates,
 - a first layer including at least one of silicon nitride and silicon nitride oxide formed on and in direct contact with the gate electrode,
 - a gate insulating layer at least comprising a second layer including silicon oxide over the first layer,
 - a semiconductor layer over the gate insulating layer;
 - a wiring connected to at least one of a source and a drain; and
 - a third layer including at least one of silicon nitride and silicon oxide formed on and in direct contact with the wiring,wherein the wiring comprises a chained metal body of nanoparticles.

3. (Previously Presented) A liquid crystal display device comprising:
- a pair of substrates;
 - a liquid crystal interposed between the pair of substrates;
 - a first thin film transistor over one of the pair of substrates;
 - a pixel electrode connected to the first thin film transistor;
 - a driver circuit constructed by a second thin film transistor which comprises the same layer structure as the first thin film transistor; and
- a wiring extending from the driver circuit and connected to a gate electrode of the first thin film transistor,
- wherein the first thin film transistor comprises:
- the gate electrode comprising a chained metal body of nanoparticles over the one of the pair of substrates,
 - a first layer including at least one of silicon nitride and silicon nitride oxide formed on and in direct contact with the gate electrode,
 - a gate insulating layer at least comprising a second layer including silicon oxide over the first layer, and
 - a semiconductor layer over the gate insulating layer.
4. (Previously Presented) A liquid crystal display device comprising:
- a pair of substrates;
 - a liquid crystal interposed between the pair of substrates;
 - a first thin film transistor over one of the pair of substrates;
 - a pixel electrode connected to the first thin film transistor;
 - a driver circuit constructed by a second thin film transistor which comprises the same layer structure as the first thin film transistor; and
- a first wiring extending from the driver circuit and connected to a gate electrode of the first thin film transistor,
- wherein the first thin film transistor comprises:
- the gate electrode comprising a chained metal body of nanoparticles over the one of the pair of substrates,
 - a first layer including at least one of silicon nitride and silicon nitride oxide formed on and in direct contact with the gate electrode,

a gate insulating layer at least comprising a second layer including silicon oxide over the first layer,

a semiconductor layer over the gate insulating layer;

a second wiring connected to at least one of a source and a drain; and

a third layer including at least one of silicon nitride and silicon oxide formed on and in direct contact with the second wiring,

wherein the second wiring comprises a chained metal body of nanoparticles.

5. (Previously Presented) The liquid crystal display device according to any one of claims 1 to 4, wherein the chained metal body of nanoparticles comprises Ag.

6. (Currently Amended) The liquid crystal display device according to ~~claim 2 or 4~~ any one of claims 1 to 4,

wherein the semiconductor layer comprises at least one of hydrogen and halogen; and

wherein the semiconductor layer is a semi-amorphous semiconductor having a crystal structure.

7. (Previously Presented) The liquid crystal display device according to claim 3 or 4, wherein the driver circuit comprises only an n-channel type thin film transistor.

8. (Currently Amended) The liquid crystal display device according to claim 1 or 2, wherein the semiconductor layer includes hydrogen and halogen, wherein the semiconductor layer has a crystal structure, and wherein the thin film transistor is capable of being operated in electric field effect mobility of from ~~1 cm²/V·sec to 15 cm²/V·sec~~ 1 cm²/V·sec to 15 cm²/V·sec.

9. (Currently Amended) The liquid crystal display device according to claim 3 or 4, wherein each of the semiconductor layer of the first thin film transistor and a semiconductor layer of the second thin film transistor includes hydrogen and halogen, wherein each of the semiconductor layer of the first thin film transistor and the semiconductor layer of the second thin film transistor has a crystal structure, and

wherein the first thin film transistor and the second thin film transistor are capable of being operated in electric field effect mobility of from ~~$1\text{ cm}^2/\text{V}\cdot\text{sec}$ to $15\text{ cm}^2/\text{V}\cdot\text{sec}$~~ $1\text{ cm}^2/\text{V}\cdot\text{sec}$ to $15\text{ cm}^2/\text{V}\cdot\text{sec}$.

10. (Original) A liquid crystal television receiver comprising the liquid crystal display device according to any one of claims 1 to 4.

11. (Currently Amended) A method for manufacturing a liquid crystal display device comprising the steps of:

forming a gate electrode comprising a chained metal body of nanoparticles over a substrate having an insulating surface ~~with a droplet discharge method using a composition containing conductive nanoparticles;~~

laminating a gate insulating layer, a semiconductor layer, and an insulating layer over the gate electrode;

forming a first mask in a position overlapping with the gate electrode with a droplet discharge method;

forming a channel protective layer by etching the insulating layer by using the first mask;

forming a semiconductor layer containing one conductivity type impurity;

forming a second mask in a region including the gate electrode with a droplet discharge method;

etching the semiconductor layer containing one conductivity type impurity and the semiconductor layer by using the second mask;

forming source and drain wirings with a droplet discharge method; and

etching the semiconductor layer containing one conductivity type impurity over the channel protective layer by using the source and drain wirings as masks.

12. (Currently Amended) A method for manufacturing a liquid crystal display device comprising the steps of:

forming a gate electrode and a connection wiring each comprising a chained metal body of nanoparticles over a substrate having an insulating surface ~~with a droplet discharge method using a composition containing conductive nanoparticles;~~

laminating a gate insulating layer, a semiconductor layer, and an insulating layer over the gate electrode;

forming a first mask in a position overlapping with the gate electrode with a droplet discharge method;

forming a channel protective layer by etching the insulating layer by using the first mask;

forming a semiconductor layer containing one conductivity type impurity;

forming a second mask in a region including the gate electrode with a droplet discharge method;

etching the semiconductor layer containing one conductivity type impurity and the semiconductor layer by using the second mask;

partially exposing the connection wiring by selectively etching the gate insulating layer;

forming a source wiring and a drain wiring and connecting at least one of the source wiring and the drain wiring to the connection wiring at the same time; and

etching the semiconductor layer containing one conductivity type impurity over the channel protective layer by using the source and drain wirings as masks.

13. (Previously Presented) The method for manufacturing a liquid crystal display device according to claim 11 or 12, wherein the step of laminating the gate insulating layer, the semiconductor layer, and the insulating layer over the gate electrode is carried out without exposing to the atmosphere.

14. (Previously Presented) The method for manufacturing a liquid crystal display device according to claim 11 or 12, wherein the gate insulating layer is formed by sequentially laminating a first silicon nitride film, a silicon oxide film, and a second silicon nitride film.

15. (Canceled)

16. (Previously Presented) The method for manufacturing a liquid crystal display device according to claim 11 or 12, wherein the first mask is formed using a composition containing conductive nanoparticles.

17. (Previously Presented) The method for manufacturing a liquid crystal display device according to claim 11 or 12, wherein the second mask is formed using a composition containing conductive nanoparticles.
18. (Previously Presented) The method for manufacturing a liquid crystal display device according to claim 11 or 12, wherein the source and drain wirings are formed using a composition containing conductive nanoparticles.
19. (New) The method for manufacturing a liquid crystal display device according to claim 11, wherein the gate electrode comprising a chained metal body of nanoparticles is formed by discharging a composition containing conductive nanoparticles with a droplet discharge method and drying the composition containing conductive nanoparticles.
20. (New) The method for manufacturing a liquid crystal display device according to claim 12, wherein the gate electrode and the connection wiring each comprising a chained metal body of nanoparticles are formed by discharging a composition containing conductive nanoparticles with a droplet discharge method and drying the composition containing conductive nanoparticles.
21. (New) The method for manufacturing a liquid crystal display device according to claim 19 or 20, wherein average particle size of the conductive nanoparticles is from 5 nm to 10 nm.